



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5

77 WEST JACKSON BOULEVARD

CHICAGO, IL 60604-3590

OCT 27 2014

REPLY TO THE ATTENTION OF:

E-19J

Catherine Batey
Federal Highway Administration
3250 Executive Park Drive
Springfield, Illinois 62703

**RE: Tier Two Final Environmental Impact Statement: Illiana Corridor Project
Will County, IL and Lake County, IN (CEQ #20140274)**

Dear Ms. Batey:

The U.S. Environmental Protection Agency has reviewed the Tier Two Final Environmental Impact Statement (Final EIS) for the proposed Illiana Corridor project (IC) in Will County, Illinois and Lake County, Indiana. The IC is a new terrain linear highway project extending from I-55 near Wilmington, Illinois to I-65 near Lowell, Indiana. This letter provides our comments on the Tier Two Final EIS, pursuant to the National Environmental Policy Act (NEPA), the Council on Environmental Quality's NEPA Implementing Regulations (40 CFR 1500-1508), and Section 309 of the Clean Air Act.

The purpose of the Illiana Corridor is to provide a sustainable transportation solution that would improve east-west connectivity in the general vicinity of I-55 to the west and I-65 to the east in the study area, in a manner consistent with the commitments in the Tier One Record of Decision (ROD). Building upon the selection of Corridor B3 as the preferred corridor in the combined Tier One Final EIS/ROD, the Tier Two Draft EIS analyzed three build alternatives in addition to a No-Action Alternative. Based on a comparative evaluation of socioeconomic and environmental impacts, travel performance, and other factors including stakeholder and agency input, a refined Corridor B3, now known as mainline Alternative 1, was selected (along with IL-53 interchange Design Option 4) in the Tier Two Final EIS as the Preferred Alternative.

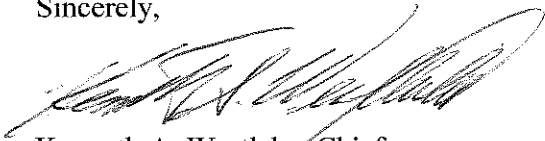
EPA has, from our earliest involvement, noted that the IC project has an opportunity to be developed using sustainable concepts. EPA has continually encouraged natural habitat connectivity throughout the IC, via reduction of habitat fragmentation, installation of riparian and upland buffers and forested corridors, and utilization of wildlife crossings in appropriate locations as design has progressed. EPA has provided comments throughout the development of the IC, most recently providing comments on the Tier Two Draft EIS on March 10, 2014. EPA appreciates FHWA's diligence in responding to comments from EPA, other Federal and state agencies, and the public, raised during the Tier Two Draft EIS comment period. Additionally, EPA commends the coordination efforts and the level of detail provided in FHWA's responses to EPA's comments on the Tier Two Draft EIS.

Nearly all of the comments provided by EPA in our Tier Two Draft EIS comment letter had a thorough response provided. We recommend that the Federal Highway Administration (FHWA) and the Illinois and Indiana Departments of Transportation (State DOTs) address our remaining concerns and issues as project design, refinement, and environmental permitting progress.

EPA's comments on the Tier Two Final EIS pertain to wildlife crossings, mitigation commitments, wetland and water resource impacts, and implementation of best management practices. Our comments are discussed in greater detail in the enclosure to this letter – *"EPA Detailed Comments on the Tier Two Final EIS for the Illiana Corridor Project."*

Thank you for the opportunity to review and comment on the Tier Two Final EIS for the Illiana corridor. Please send a signed copy of the Record of Decision to EPA once it is available. We are available to discuss our comments with you in further detail if requested. If you have any questions or comments regarding the content of this letter, please contact me at 312-886-2910 or via email at westlake.kenneth@epa.gov or Ms. Liz Pelloso, PWS, of my staff at 312-886-7425 or via email at pelloso.elizabeth@epa.gov.

Sincerely,



Kenneth A. Westlake, Chief
NEPA Implementation Section
Office of Enforcement and Compliance Assurance

cc (via email): John Fortmann, IDOT-District 1
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Robert Hommes, USFS-MNTP
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Matt Buffington, Indiana DNR-Division of Fish and Wildlife
Dan Heacock, Illinois EPA
Terry Savko, Illinois Department of Agriculture
Anne Haaker, IL SHPO
Mitch Zoll, IN SHPO

EPA Detailed Comments on the Tier Two Final EIS for the Illiana Corridor Project

October 27, 2014

WILDLIFE CROSSINGS

- Appendix Q, the Wildlife Corridor Memo, (Sheet 17 of 18) and the Section 3 Map Set (Sheet 32 of 35) show a green diamond, indicating a wildlife crossing, at Indiana site #63B (Spring Run Tributary/Wetland B-W-48 (63B/3318+00)). This is not shown as a wildlife crossing on Section 5 Preferred Alternative Map Sheet 17 of 18. Furthermore, this site is not listed as one of the 13 proposed wildlife crossings to be constructed in Indiana. While this site is identified in Appendix Q as a bridged structure, its 3.7' height clearance is not considered tall enough to make it a formal wildlife crossing in Appendix Q (Table 1 - Streams, Riparian Areas and Other Locations that Possess the Highest Potential to Provide Wildlife Corridors Across the Corridor). While this bridge will provide a wildlife crossing for small animals, larger mammals may not be able to utilize it due to height clearance limitations.

Recommendation: EPA recommends that final drawings reconcile if this bridge at Indiana site #63B (Spring Run Tributary/Wetland B-W-48 (63B/3318+00)) is, or is not, considered a wildlife crossing.

- Page 19 in Appendix Q includes specific considerations for bridged crossings to promote wildlife movement. One of those specific considerations was, *"A minimum width of 5-feet shall be used in upland areas (i.e., dry areas wildlife will use to traverse beneath the bridge) adjacent to either side of the watercourse or wetland being bridged."* Specific considerations for culvert design to promote wildlife movement across the corridor were also noted in Appendix Q, including the statement, *"A lack of suitable habitat adjacent to culverts... built for hydrologic function may prevent their use as potential wildlife crossing structures"* (Cain et al., 2003). Currently the only specified wildlife corridors in the Tier Two Final EIS are to be bridge structures or dry/upland (non-stream crossing) culvert structures. EPA reminds FHWA and the State DOTs that this would not and does not preclude the installation of additional dry culvert structure(s) adjacent to proposed hydraulic (stream crossing) culvert installations. These adjacent dry culvert structures would act as wildlife corridors, and allow for upland wildlife movement through these adjacent dry culverts in areas where the only alternative for fauna would otherwise be to traverse through flowing water conditions, which many animals will not do. EPA reiterates that while bridges and upland culvert crossings are critically important, the installation of upland wildlife culverts adjacent to proposed hydraulic culvert crossings in the areas noted as wildlife corridors (Appendix Q, Table 1, Streams, Riparian Areas and Other Locations that Possess the Highest Potential to Provide Wildlife Corridors Across the Corridor) may be just as important.

Recommendations: EPA recommends installation of upland wildlife corridor culverts at the following sites:

- **ILLINOIS**

- Water Site W46 North/UNT Kankakee River (I-55, 2601+18)
- UNT to the Kankakee River/W46 (1A/2698+48)
- Water Site W24 Unnamed Tributary to Forked Creek/(9/1266+78)
- South Branch Forked Creek Tributary (20/1708+47)

- **INDIANA**

- Wetland B-31 (61A-2/3245+20)

- The U.S. Fish and Wildlife Service (USFWS) provided a comment on Draft EIS (Appendix DD p. DD-64) stating, “*The culvert proposed at an intermittent stream (Drainage Crossing 61A-2) ...should be designed to allow for passage of reptiles, amphibians, and small mammals, similar to what we also requested at drainage Crossing 50 [Unnamed Tributary to West Creek #2/Wetland a-w31-pss (50/2952+45)].*” FHWA’s response to this comment in Appendix DD was, “*The proposed culvert at an intermittent stream (Drainage Crossing 61A-2/Sta. 3245+20) is a 36" RCP. Because riprap is being used at this location, this drainage structure will not serve as a crossing for wildlife. In general, all culverts within Indiana will follow [the Indiana Department of Transportation] INDOT’s Hydraulics and Drainage Design Manual, Section 203-2.02(10), which requires that culverts be sumped and will have riprap aprons on the upstream and downstream sides.*” On page DD-69, in response to an additional USFWS comment, FHWA stated, “*The Tier Two Final EIS has been updated to indicate that a minimum 36-inch culvert size will be used for culverts designated as wildlife crossings. All crossings identified as wildlife crossings will have wildlife passage features such as shelves on one or both sides of a stream.*”
Recommendation: EPA recommends installation of an adjacent upland box culvert or appropriately-sized culvert pipe adjacent to the hydraulic (stream crossing) culvert to function as a wildlife crossing at this location. As noted above, FHWA has stated that culvert pipes that are 36” or larger in diameter can be considered a wildlife crossing [as long as they have a 5’ or wider shelf adjacent to the stream.] Alternately or in tandem, INDOT and FHWA have the ability to utilize a design exception to justify alternate methods of streambank stabilization in lieu of riprap, including open-cell concrete revetment matting, or placement of an additional, adjacent, upland culvert to function as a wildlife crossing. Common reasons for considering design exceptions include impacts to the natural environment and sensitivity to context. Both EPA and USFWS are recommending that this site accommodate a wildlife crossing. EPA strongly recommends that FHWA and INDOT move forward with a design element at this site that incorporates this recommendation.

MITIGATION COMMITMENTS

- Table 3-174 is a summary of mitigation commitments. Many of the descriptions written in the “Impact” column use language that says that implementation of the project “may” impact or “will potentially” impact a specific resource instead of “will” impact. The Tier Two Final EIS describes expected impacts in certain terms, meaning that impacts are expected and mitigation is being prepared to compensate for those certain, expected impacts.
Recommendation: Table 3-174 impact statements in the “Impact” column should be modified to say “will” impact instead of “may” impact.
- Section 3.0 (page 3-22) of the Tier Two Final EIS states that the Indiana Department of Transportation (INDOT) is working with USFWS, the Indiana Department of Natural Resources (DNR), and other local stakeholders including Lake County Parks, to identify and formalize forest mitigation plans. At the time of the Tier Two Final EIS, there was no specific policy, ratio, or recommendation regarding both forest and tree mitigation to be implemented in Indiana. This is in contrast to specific information provided for forest and tree mitigation in Illinois, which follows specific procedures and requirements from the Illinois Department of Transportation (IDOT). Mitigation commitments described in Table 3-174 include specific ratios and commitments for Illinois forest and tree mitigation; such ratios and specific information are missing for Indiana mitigation.

Recommendation: Mitigation commitments for forest and tree mitigation in Indiana should include ratios and commitments to be undertaken; these commitments should be added to Table 3-174. As it appears Indiana may not have similar procedures to Illinois' requirements, EPA suggests that INDOT adopt IDOT requirements for forest and tree mitigation for the IC project, and move forward with these commitments by adding them to Table 3-174.

- Table 3-174, on page 3-772 in the "Natural Resources – Wildlife Resources" section, refers to the "potential" locations for wildlife crossings discussed in the Tier Two Final EIS (19 in Illinois, 13 in Indiana). However, the "Mitigation Measure" column for this section commits to only one wildlife crossing installation – the Wauponsee Glacial Trail crossing (1404+08). The remaining text in the column is non-committal, stating that *"the number and specific locations for additional wildlife crossings will be determined by IDOT and INDOT during detailed design."* Failure to include, and commit to the 19 Illinois and 13 wildlife crossings discussed by EPA, USFWS, IDNR, IDEM, and FHWA would undermine the lengthy collaborative process undertaken by the agencies to come up with the current list of 32 wildlife crossings studied in the Final EIS and Appendix Q.

Recommendations: Table 3-174 should be modified to include commitments to install, at a minimum, the 19 identified wildlife crossings in Illinois and the 13 wildlife crossings identified in Indiana. The language currently used in the commitment column that *"the number and specific locations for additional wildlife crossings will be determined by IDOT and INDOT during detailed design"* can still be utilized, as long as the commitments to installing the 19 Illinois and 13 Indiana wildlife crossings are made.

- In a response to a USFWS comment on the Tier Two Draft EIS, FHWA stated, *"All crossings identified as wildlife crossings will have wildlife passage features such as shelves on one or both sides of a stream."* (DD-69). However, this commitment was absent from Table 3-174 (page 3-772 in the "Natural Resources – Wildlife Resources" section).

Recommendation: EPA recommends that this statement be added to the commitments and "mitigation measures" column in the "Natural Resources – Wildlife Resources" section of Table 3-174.

- In Appendix DD (Response to Comments - Page DD-11), FHWA's response to USACE's concerns on wildlife crossings stated in their Tier Two Draft EIS comment letter said, *"Additional measures to enhance/create habitat on either side of the wildlife crossing and features that will serve to direct species towards the crossings and away from the roadway will be considered in the final design of the project. Potential wildlife crossings may include fencing along both sides of a road to direct animals to the crossing and to prevent animals from accessing the road. The fencing would not block entrances to crossing structures. Suitable habitat for species will be considered on both sides of the crossing structure. Crossing structures will be monitored for, and cleared of, obstructions such as detritus or silt blockages that impede movement. Site-specific landscape re-vegetation plans will be considered at any locations where wildlife crossings are incorporated into the design."* However, this commitment was not included in Table 3-174 – Summary of Mitigation Commitments.

Recommendation: EPA recommends that this language be added into Table 3-174 as a mitigation measure under the "Natural Resources – Wildlife Resources" heading. Specifically, language for the transportation agencies to also work with the Illinois DNR, Indiana DNR, and USFWS regarding fencing and funneling techniques should also be

included in mitigation commitments. Wildlife crossings will not be successful without installation of fencing to direct animals to cross at specific wildlife crossing locations.

- In Appendix DD (Response to Comments - Page DD-35), comment #50 from the U.S. Forest Service - Midewin National Tallgrass Prairie (MNTP) in their Tier Two Draft EIS comment letter to FHWA suggested, as a mitigation commitment, that MNTP be allowed to “*collect selected seed and live plants from the construction footprint of the Illiana for preservation and propagation at Midewin.*” EPA strongly encourages this as a mitigation component; however, this commitment was not found in Table 3-174 – Summary of Mitigation Commitments.
Recommendation: EPA recommends that Mitigation Commitments in Table 3-174 be amended to specifically commit to allowing MNTP to collect selected seed and live plants from the construction footprint of the IC for preservation and propagation at MNTP.
- In Appendix DD (Response to Comments - Page DD-35), comment #51 from MNTP in their Tier Two Draft EIS comment letter to FHWA suggested that FHWA/IDOT “*utilize the numerous buildings, roads, and rail beds on Midewin as potential material sources for the Illiana.*” FHWA’s response to this comment, found on Page DD-36, stated “*The mitigation commitments that are made for bunker and roadbed material removal at MNTP are included in Section 3.23 [Summary of Mitigation Commitments] of the Tier Two FEIS. The determination of feasibility for the re-use of these removed items as Illiana Corridor construction components will be evaluated during the design phase of the project.*” EPA was unable to find this commitment, or any specific commitments regarding bunker and roadbed material removal at MNTP, in Section 3.23 or in Table 3-174 – Summary of Mitigation Commitments.
Recommendation: EPA recommends that Mitigation Commitments and Table 3-174 be amended to commit to reusing materials removed from MNTP as IC roadbed materials, if and where appropriate.
- In Appendix DD (Response to Comments - Page DD-131), comment #218 from the Indiana Department of Environmental Management (IDEM) in their Tier Two Draft EIS comment letter to FHWA suggested specific comments regarding implementation of sediment and erosion control measures. FHWA’s response to this comment, found on page DD-131 and DD-132, incorporated specific commitments, including paying special attention at areas with high topographic relief near wetlands and other water resources, such as the hill and valleys east of West Creek, adjacent to wetland B-W37 (between Stations 3220-3250). Specifically, FHWA stated, “*The States are committed to initiating stabilization measures as soon as practicable at idle, disturbed, highly erodible soils and/or exposed soils adjacent to wetlands or surface waters, and any work below the OHWM [Ordinary High Water Mark] of a stream. Special attention will be provided at areas with high topographic relief near wetlands and other water resources, such as the hill and valleys east of West Creek, adjacent to wetland B-W37 (between Stations 3220 and 3250). Appropriate Soil Erosion and Sediment Control practices will be installed as necessary to protect wetland/water resources, which may include rapid initiation of erosion control installation (if disturbed soils will sit idle for more than 7 days) and incremental seeding in 5 foot or 10 foot lifts in conjunction with sediment and run-off controls.*” However, these specific recommendations from IDEM, and FHWA’s commitments, were not included in the Mitigation Commitments section (Section 3.23, page 3-781) of Table 3-174.
Recommendation: EPA recommends that these specific sediment and erosion control commitments, as stated above from FHWA and originally suggested by IDEM, be added to the mitigation measures discussed on page 3-781 of Table 3-174.

- Table 3-174 is a useful summary of mitigation commitments.
Recommendation: After modifications/language additions noted above in all bullet points in this section, Table 3-174 should be carried into the Tier Two ROD to summarize the Tier Two Final EIS mitigation commitments.

STORMWATER & BEST MANAGEMENT PRACTICES (BMPs)

- FHWA stated throughout the Tier Two Final EIS documents that “*detention areas and other stormwater BMPs [will be] located outside of woodlands, wetlands, surface waters, and riparian areas, to the extent practicable. Unavoidable impacts to these resources will be mitigated in accordance with state and federal requirements/policies.*”
Recommendation: EPA reiterates the comment from our March 10, 2014, Tier Two Draft EIS comment letter that natural wetlands and existing streams should not be used for stormwater detention or pollution prevention devices. All stormwater BMPs and detention areas should be built and located outside of natural wetlands and streams.
- EPA has compared the BMP maps found in Appendix F to wetland impacts shown on the Section 3.0 map set pages.
Recommendations: In response to comparison of the BMP maps to the Section 3.0 maps, EPA has the following comments/recommendations:
 - Wetland 383 (2.83 acres) is proposed to be fully impacted by implementation of the Preferred Alternative. However, Section 3.0 Map Sheet 3 shows only a small fill footprint in this wetland due to interchange ramp construction. BMP maps (Appendix F Sheet 1) show proposed BMPs being built around, and not in, this wetland, thereby avoiding this wetland impact. EPA assumes that impacts to this wetland will be well below the 2.83 acres of wetland impact proposed in the FEIS. This should be clarified before final design and permitting.
 - The Preferred Alternative proposes 2,137’ of impact to Forked Creek and to an unnamed tributary to Forked Creek near the vicinity of proposed stream crossing #9 (shown on Section 3.0 Map Sheet 7). Portions of this impact propose filling the entire unnamed tributary located north of the proposed Illiana centerline, east of proposed crossing #9. The Final EIS is not clear why this tributary fill is required or necessary. Thoughtful design may allow for keeping this as an open stream channel, and would avoid impacts to a majority of the stream impact proposed here. Additionally, BMP Maps in Appendix F (Sheet 5) show a proposed BMP in the location of the filled tributary stream. EPA strongly recommends that the tributary stream be left as an open channel and that BMPs be relocated away from (and not built in) this area.
 - The Preferred Alternative proposes impacts to 0.25 acre of Wetland 172 (2.01 acres). Section 3.0 Map Sheet 8 shows a small fill footprint in this wetland with no clear indication why this fill is required. BMP maps (Appendix F Sheet 6) show proposed BMPs being built around, and not in, this wetland, thereby avoiding this impact. EPA assumes that impacts to this wetland will not be required. This should be clarified before final design and permitting.
 - The Preferred Alternative proposes impacts to 0.34 acre of Wetland 173 (2.18 acres). Section 3.0 Map Sheet 8 shows a small fill footprint in this wetland with no clear indication why this fill is required. BMP maps (Appendix F Sheet 6) show proposed BMPs being built around, and not in, this wetland, thereby avoiding this

impact. EPA assumes that impacts to this wetland will not be required. This should be clarified before final design and permitting.

- BMP maps (Appendix F Sheet 7) currently show BMPs sited around the existing Site W19 stream (unnamed tributary to Forked Creek) at the proposed Wilton Center Road interchange. A stream relocation is proposed at this interchange to relocate the unnamed tributary outside of the interchange (shown on Section 3.0 Map Sheet 11 and Section 5 maps Sheet 6). EPA recommends that BMPs in this vicinity be moved and thoughtfully designed to provide water quality benefits to the relocated stream.
- Wetland 98 (1.60 acres) is proposed to be fully impacted by implementation of the Preferred Alternative. Section 3.0 Map Sheets 15 and 16 show the proposed I-57 interchange ramps in close proximity to this wetland; however, it is not clear why the entire wetland is proposed to be impacted. BMP maps (Appendix F Sheet 11) show proposed BMPs being built adjacent to and around, but not in, this wetland, thereby avoiding this impact. EPA assumes that impacts to this wetland will not be required. This should be clarified before final design and permitting.
- BMPs are shown as being constructed within the unnamed tributary to West Creek (Site W4) on BMP maps (Appendix F Sheet 18). EPA recommends that BMPs in this vicinity be altered/thoughtfully designed to provide water quality benefits to this unnamed tributary to West Creek without being constructed in the stream itself.

WETLAND AND WATER RESOURCE IMPACTS

- The Preferred Alternative proposes stabilization of approximately 700 linear feet of an unnamed tributary to the Kankakee River (Site W42; also referred to as Gartke Ditch. The Tier Two Final EIS proposes regrading and stabilizing Gartke Ditch from its confluence with the Kankakee River upstream approximately 700 feet using a combination of hard armoring (e.g., riprap and gabion baskets) and vegetative measures. FHWA, in a response to USFWS comments received on the Tier Two Draft EIS (Appendix DD, page DD-76), stated, *“Every attempt will be made to use naturalized solutions over unnatural, structural solutions for stream mitigation/restoration associated with the Illiana project. Stream mitigation/restoration will take into consideration fluvial geomorphologic principles (scientific principles applied to rivers) to allow for a design that complements the creek or river.”*

Recommendation: EPA does not support the use of gabion baskets as a stabilization solution. The Tier Two Final EIS did not provide evidence of the need for stabilization in this area. Review of aerial photography shows that the stream is currently trapped between adjacent roads directly to the east and west. However, natural streambank stabilization methods are preferred by EPA, particularly as this stream enters a forested corridor in the vicinity of its confluence with the Kankakee River. EPA recommends that thoughtful bio-engineered stabilization methods be utilized, should it be determined that stabilization is actually necessary along the streambank.

- In their comment letter on the Tier Two Draft EIS, IDEM shared concerns about Indiana wetland a-w33 and the presence of Fen Orchid (*Liparis loeselii*), a species on the Watch List of the Indiana DNR - Division of Nature Preserves, in the area. IDEM's comments on the Tier Two Draft EIS recommended that FHWA and INDOT further reduce impacts in this area (impacts to 1.05 acres of the emergent portion of the 6.85 acre emergent/forested wetland a-w33). As the area requires a grade separation due to existing railroad tracks, IDEM noted that alternatives

should be developed to use technologies that minimize slope and the overall footprint of the separation, thereby reducing impacts to this wetland and sensitive plant species.

Recommendation: EPA supports IDEM's recommendation regarding further minimization of impacts in the vicinity of wetland a-w33 and to the Fen Orchid. Design technologies should be utilized to minimize impacts.

- EPA has reviewed the wetland impacts shown on the Section 3.0 map set pages.

Recommendations: In response to review of the wetland impacts shown on the Section 3.0 maps, EPA has the following comments/recommendations regarding further avoidance and minimization of impacts to water resources:

- The Preferred Alternative proposes 0.16 acre of impact to 0.74-acre Wetland 216. Impacts are within the right of way (ROW) of the IC, and appear to not be due to required fill for actual road construction. This impact to Wetland 216 may be avoidable if the ROW is minimized in this area, or if grading in this area is not required.
- The Preferred Alternative proposes 2,137' of impact to Forked Creek and to an unnamed tributary to Forked Creek near the vicinity of proposed Crossing #9. Portions of this impact propose filling the entire unnamed tributary located north of the proposed Illiana centerline, east of proposed Crossing #9. The Final EIS is not clear why this tributary fill is required or necessary. Thoughtful design may allow for keeping this as an open stream channel, and would avoid impacts to a majority of the stream impact currently proposed.
- The Preferred Alternative proposes impacts to 0.02 acre of Wetland 113 (4.27 acres). Section 3.0 Map Sheet 13 shows a small fill footprint in this wetland with no clear indication why this fill is required. Impacts are within the ROW of the IC, and appear to not be due to required fill for actual road construction. This impact may be avoidable if the ROW is minimized in this area, or if grading in this area is not required.
- The Preferred Alternative proposes complete impacts to Wetland 87 (0.16 acre). Section 3.0 Map Sheet 17 shows no clear indication why this fill is required. This impact appears to be completely avoidable.
- The Preferred Alternative proposes impacts to 0.13 acre of Wetland 83 (0.76 acre). Section 3.0 Map Sheet 17 shows a small fill footprint in this wetland with no clear indication why this fill is required (nor is this wetland shaded for impact). This impact appears to be completely avoidable.
- Section 3.0 Map Sheet 17 shows a small fill footprint in Wetland 89. There is no clear indication why this fill is required. Additionally, Wetland 89 is not noted as a wetland to be impacted in Table 3-122 of the Tier Two Final EIS. This impact was not accounted for in the Final EIS and may not be necessary.
- The Preferred Alternative proposes impacts to 0.56 acre of Wetland 63 (1.71 acres). Section 3.0 Map Sheet 19 shows a small fill footprint in this wetland with no clear indication why this fill is required. Impacts are within the ROW of the IC, and appear to not be due to required fill for actual road construction. This impact may be avoidable if the ROW is minimized in this area, or if grading in this area is not required.
- The Preferred Alternative proposes impacts to 0.08 acre of Wetland 42 (1.77 acres). Section 3.0 Map Sheet 20 shows a small fill footprint in this wetland with no clear indication why this fill is required. Impacts are within the ROW of the IC, and appear to not be due to required fill for actual road construction. This impact may

be avoidable if the ROW is minimized in this area, or if grading in this area is not required.

- Additional wetlands appear to be avoided but are noted in the Tier Two Final EIS (in Table 3-122) as proposed to be impacted. See wetland-related BMP comments earlier in this letter regarding this issue.
- The Preferred Alternative proposes 1,390' of impact to an unnamed tributary to Pike Creek (Site W5) near the vicinity of proposed Crossing #46. Portions of this impact propose filling the entire unnamed tributary located east of Pike Creek. While portions of this tributary may be close to the southern part of the roadway, the Final EIS is not clear why removing (via fill) the entire length of tributary channel is necessary. Thoughtful design may allow for keeping this as an open stream channel, and would avoid impacts to a majority of the stream impact proposed here. Tributary channel relocation in lieu of stream fill should also be considered.